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Individual Personalized Learning

Judy Hughey

What is Personalized Learning?

Our ancestors reveled in personalized learning, orally sharing stories of family and community history. Certainly, it could be said that the oral histories shared within families might not always be entirely accurate; perhaps they were revised year-to-year or revised due to memory issues. However, the criteria of relevancy and meaningfulness that made the personalization of the oral sharing of family history successful are what makes personalized learning successful today.

The formal definition of personalized learning provided by the U.S. Department of Education in the 2017 National Education Technology Plan is:

Personalized learning refers to instruction in which the pace of learning and the instructional approach are optimized for the needs of each learner. Learning objectives, instructional approaches, and instructional content (and its sequencing) all may vary based on learner needs. In addition, learning activities are meaningful and relevant to learners, driven by their interests, and often self-initiated (U.S. Department of Education, 2017, p.1). The Rand Report (2017), funded Bill and Melinda Gates, defined personalized learning as the “practices that tailor the pace and focus of instruction to address the needs and goals of each student.” (p. 1)

The definitions of personalized learning vary depending on the framework of the author; however, common themes that describe personalized learning are a student-centered approach, student agency, flexible learning, demonstrated mastery of competencies, and a holistic perspective to the whole child (DeMonte, 2019). The theoretical foundations and originations of personalization are generally considered to be Gardner’s (2011) Theory of Multiple Intelligences and Self-Determination Theory (Ryan & Deci, 2000), although Peng, Ma, and Spector (2019) trace personalized learning to Confucius, Socrates, and Dewey. Multiple intelligence theory (Gardner, 2011) proposes that individuals are able to connect instructional content in eight different “intelligences” rather than the most dominant, linguistic and logical-mathematical, in traditional educational settings. Self-determination theory, a humanistic approach, represents a framework of human motivation and personality and is based on the psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 1990). The two noted theories directly relate to the instructional approach to effectively implement individual personalized learning. A combination of the two provides an additional perspective of including data-informed decision making to create a personal development layer with a personal vision and assessment.

Personalized learning is designed to address the disengagement of today’s students and to be proactive in closing the growing achievement gaps occurring in far too many schools. The goal of personalized learning is to engage students in the process, building on their interests, aptitudes, and strengths, thus creating intrinsic motivation for achievement and success. Students feel empowered when involved in goal-setting and decision-making processes.

One primary key to effective individualized personalized learning is sparking the innate curiosity of students through active engagement with their environment. Activities included in this learning paradigm are intended to be meaningful and relevant, and promote individual development. The focus on learner strengths is integral to engagement and empowerment in this learning process. The use of videos for educational tutorials on most any topic is an excellent example of the change in paradigm and availability in learning opportunities. Detlor, Booker, Serenko, and Julien (2012) reported on the array of educational settings and tools that learners in the 21st century may choose to expand knowledge, skills, and competencies. Today's education opportunities may occur with YouTube sessions, lunch-and-learn training, case study review, gamification, problem-based activities, podcasts, Coursera, Khan, Ted Ed, MOOC's, open courseware, and other web-based learning tools. The incentives and digital tools implemented vary depending on the learner's needs and demographic.

Individual personalized learning can occur in a variety of settings and formats. Technology has provided greater opportunities and mediums for meeting learner needs. The ability to personalize learning with flexible environments has been a game changer for education. Liu, Huang, and Wosinsk (2017) stated, "the fusion and development of information technology eliminates the barriers preventing the sharing of information and knowledge, as well as the learning boundary" (p. 185). The enhanced potential provided by digitized curricula and technology applications offer unique opportunities for those with physical and cognitive challenges. In addition, technology provides a framework for access to international educational experiences designed to enhance learners' worldview and global perspectives. Technology can support personalized initiatives that provide a platform for students to learn in the virtual environment. This type of personalized learning can focus on facilitating interactions and reflections between cross-cultural groups. As with other models of personalized learning, the ultimate goals are to develop enhanced employability competencies, improved communication skills, stimulate critical thinking, and grow deeper appreciation for others' perspectives resulting in greater tolerance for differences.

Why the Need for Personalized Learning?

The digital transformation of the educational landscape and the employment needs of the global society present the need for a revolutionary transformation in education. Oliver (2019) stated that education must be "relevant to continue to shape our children's identity and integration into society" (p. 13). Artificial intelligence, robotics, and other technologies have been predicted to completely reform future employment. Educators need to be preparing students for jobs not yet in existence. Bughin, Lund, and Hazin (2018) reported that the global economy has moved from physical to cognitive tasks, to the need for more digitized skills. The need for social emotional skills, leadership, and willingness to take initiative accompanied with greater cognitive, creativity, and problem-solving abilities is predicted to significantly increase emphasizing the need for all to become lifelong learners (Bughin et al., 2018). The focus on lifelong learning and a reorganization of educational content and delivery structures have been labeled as "urgent" with a call for immediate action (Oliver, 2019).

The change in employer, employee, and learner needs created a call for action in the education

profession. Individual personalized learning addresses needed changes by transforming, connecting, and empowering learners, educators, and students. Frame (2013) explicitly discusses the revised role of the teacher in a constructivist and personalized approach encouraging educators to assume the role of facilitators, guides, and coaches rather than all-knowing providers of information. In individual personalized learning educators become the leaders to support learners search for finding their own knowledge (Frame 2013). OECD Trends Shaping Education (2019) reported the most anticipated continuing education and the professional development topics of the future. The topics interact and align with individualized personalized education, demonstrating that the approach of personalizing learning is not a temporary fad.

Examples of future professional development needs as identified by Trends Shaping Education (2019) include:

- Fostering public and private initiatives to reskill and upskill individuals throughout their working lives;
- Ensuring all age groups have access to education that covers their learning and life needs, including health, financial and digital literacy skills;
- Promoting continuous professional development of teachers and school leaders via in-job training and peer learning (e.g., peer evaluation, professional networks);
- Teaching and learning about emotions and social skills for all ages;
- Providing targeted initial teacher education and continuous professional learning that addresses holistic well-being of children and adults;
- Combatting loneliness and isolation and challenging prejudices and age discrimination;
- Addressing obesity, smoking, sleep deprivation and other public health concerns through collaboration between local education institutions and healthcare providers;
- Offering education and training in caring for fragile elders and other expanding job markets; and
- Supporting excellence in medical research and science. (p. 84)

Personalization in schools impacts the climate and culture felt by teachers, parents, and students (McCarty, 2014; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). The relationship between student and teacher is key to the discovery of student needs, interests, and aptitudes (National Forum on Education Statistics, 2019).

Schools today are tasked with measuring and working to create a positive school climate referring to a school's attributes in terms of relationships among students and educators, learning and teaching practices, values and norms, and community connections (Anderson, 2011; Maxwell, Reynolds, Lee, Subasic, & Bromhead, 2017; Moos, 1987; Thapa, Cohen, Guffey, Shawn, & Higgins-D'Alessandro, 2012). Empirical evidence confirmed that the creation of school climate that is perceived as safe and valuing the individuality of students and staff is powerful in affecting teacher success in promoting and supporting students' academic achievement (Chen & Weikart, 2008; Collins & Parson, 2010). Personalizing professional development for educators models the theme of empowerment and delivery format of the approach. The personalized initiatives are developed with the goal of building relationships, validating identity, promoting engagement, and enhancing motivation. Learners, including

educators and students, choose to participate in the micro-credential according to their interests, needs, and strengths.

What Are Micro-Credentials?

Micro-credentials evolved from digital badges to become a common approach to professional development and exemplar of individual personalized learning. Greene (2019) described Micro-credentials as “one of the hot rising ideas in the education space.” (p. 1). Micro-credentials have also been described as “non-formal signals of educational achievement” that “present an alternative solution to preparing for the future of work” (Oliver, 2019, p. 1). This form of professional development allows learners of all ages and educational levels, to select a specific skill or area of competency to develop for the purpose of advancing their professional trajectory or reach a personal goal. Micro-credentials delivered by web-based technology allow for accessibility and convenience, specifically in rural and more isolated geographic areas. A significant characteristic of the micro-credential is the power given to the learner which increases the meaning and value of the experience.

A micro-credential at Kansas State College of Education is described as:

Micro-credentials provide rigorous, self-paced, job-embedded learning opportunities for educators that want to develop and improve as professionals. Each micro-credential is directly tied to an educator’s individual interests while supporting and strengthening current education (counseling and teaching) practices in innovative ways. Completing a micro-credential requires educators to make connections from promising practices to their own teaching by submitting artifacts to demonstrate evidence of critical reflection on learning and professional growth. (Hughey, 2017)

Micro-credentials are bite-size learning activities or professional development experiences that can often be stacked to create a tower of knowledge or expertise. Whether the learner be the teacher or student, the micro-credential provides an opportunity for personalized learning on a topic of interest and meaning to the learner, thus increasing internal motivation and agency.

When the learner has involvement in the selection of topic and/or activities of the micro-credential, research indicates that the depth of the learning is enhanced (Pane, Steiner, Baird, Hamilton, & Pane, 2017). Tennessee’s model referred to this strength of micro-credentials as “voice and choice” (DeMonte, 2018).

Brown (2019) reported that “the personalized aspect of micro-credentials—that educators have agency to select which micro-credentials to earn—aligns with the Learning Designs Standard for Professional Learning, and also fits three research-backed interventions identified for enhancing learner interest: contexts evoking prior individual interest, problem-based learning, and enhancing utility value” (p. 8). The micro-credential includes invoking the learner’s intrinsic motivation, exposure to new knowledge, support for skill development, and reflection on the process.

Personalized learning through micro-credentialing occurs for high school learners and adult learners. The Cherry Creek School District in Colorado defined their Summit Micro-credential Program as the “exemplar” of personalized learning. Often the process is completed with performance-based assessments designed to showcase one’s skills demonstrating mastery.

Students are able to earn stackable skills and promote their credentials with links on the Common Application and resume. Micro-credentials at Cherry Creek and other settings, can be earned in and out of classrooms and/or school settings. Engagement in the community with civic organizations or businesses are excellent opportunities for skill building and networking.

Undergraduate and graduate students are also included in the micro-credential movement. Many organizations are providing platforms for universities to offer micro-credentials through a growing number of profit and non-profit companies. Twenty percent of American colleges offer a micro-credential, according to deLaski (2019). One reason cited for post-secondary involvement in providing micro-credentials is the projected enrollment declines at the same time our country is facing a shortage of technical workers

[\(https://www.educationdive.com/news/whats-in-a-microcredential/556606/\)](https://www.educationdive.com/news/whats-in-a-microcredential/556606/)

Micro-credentials has been referred to as the future of professional learning (<https://www.gettingsmart.com/2017/11/micro-credentials-transforming-professional-learning/>). The personalized self-directed learning process provides educators with a meaningful, authentic, professional development experience. Educators feel a sense of empowerment when given control over their goals and activities. Upon completion of the process, the micro-credential can be placed on their resume, cv, and/or portfolio.

Reflections and Voices from Individual Plan of Study Micro-Credential Participants

Those that participated in a micro-credential implemented by Kansas State University validated the positive outcomes of the micro-credential professional development process. Following are quotes and reflections from participants of the IPS micro-credential:

A teacher from one high school stated, “I sought this micro-credential for a number of reasons. Our school district began to implement the new state requirement for each high school student to maintain an Individual Plan of Study (IPS) last spring using a counselor-teacher model. But we did so in a rather hasty and pulled together way that left many teachers frustrated and uncertain. When the opportunity to earn this credential came up, I decided working toward it could be a way for me to help lead us into a better method this coming school year. Information I have gathered through the process of learning for this micro-credential puts me in a position to help us more forward with a better, more solid plan for future semesters.”

“I loved that this course gave me the flexibility to choose what to implement, yet allowed me to learn a variety of things. I felt it was an effective way to get started on this new process of Individual Plans of Study, and empowered teachers in their learning and growth. If given another opportunity, I would endeavor on another micro credential experience.”

“I have used the resources that were made available during the micro-credential to support my district implementing a new career system.”

“I now have administrative support to create a comprehensive counseling program and I am thrilled for the benefits our students and staff will glean as a result.”

“The students of the KSU IPS micro-credential participants were positively impacted by the activities and felt their career development went further than the typical interest inventory or planning.”

“I believe the impact of engaging students in this development was extremely positive.”

“Students responded well to looking at looking at a new way to see themselves and their future career, new ways to demonstrate skills, and finding creative ways to market those skills, all while focusing on being effective people and having positive relationships.”

“Students were refreshed with the idea of doing anything they could for a career (and even the idea of having more than one career) but molding their current skills to that career while also developing new ones.”

“Students enjoyed the creativeness and autonomy of the activities in the IPS process.”

“I believe student impact was very positive. Students responded well to learning about themselves and discussing their strengths and weaknesses, which follows their current development stage of identity searching. Students requested that I continue these mini-lessons and ideas next semester, and I plan to use the content of this micro-credential to help me in that. Students are hungry to learn how they fit into the world of work, and want to be successful in that capacity. I believe the resources of this course demonstrated for them more viewpoints and more possibilities than the standard technical training, associate’s degree, or bachelor’s degree. It was exciting to be allowed to implement both my own and student creativity.”

“In one particular lesson, students had a lot of fun, but they also had great discussion at the end with the leading questions provided. We talked about how these soft skills are demonstrated in several different ways and can overlap. For example, by demonstrating patience, you are also demonstrating respect and listening. We then talked about how these skills are employable now, not just post-secondary within a career. Students enjoyed being reminded that their current career is being a student. While this is good “head knowledge” they carry around, it is often a helpful reminder that being a student is currently practicing and developing future career skills and not a means to an end. Finally, we talked about their personal experiences from which they drew to create their skits, which led us to how we demonstrate soft skills to people who don’t necessarily reciprocate them. When we are not treated with the respect these soft skills give us, it is almost more important to demonstrate these 20 soft skills in order to have effective and collaborative relationships that last. Our responses to others are sometimes more important than or initial interaction with them.”

Summary

The creation of an individual personalized learning environment, including micro-credentials, could occur with P-12 student in a traditional or alternative educational setting or in professional development for educators or other professionals. Personalized learning initiatives can be formed to fit the needs of the participants and aligning with the systems and structures to pursue the personalization and credential that best fits the need. The benefits of individual personalized instruction support needed learning opportunities that will accommodate the learner's personal and professional life.

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